

I Claim as My Invention:

1. A method for transmitting at least one client signal which has a first transmission bit rate within a server signal which has a predetermined second transmission bit rate, wherein the first and second transmission bit rates are

5 different, the method comprising the steps of:

determining for at least one client signal, at a transmission end, at least one identification number which indicates a relationship between the first and second transmission bit rates;

10 inserting, uniformly, data in the at least one client signal into the server signal via sigma-delta modulation and using the determined identification number;

transmitting the server signal with the determined identification number; and

determining, at a receiving end, the data in the at least one client signal from the transmitted server signal via sigma-delta modulation and the transmitted

15 identification number.

2. A method for transmitting at least one client signal within a server signal as claimed in claim 1, wherein the server signal has a frame structure, with each server frame being subdivided into an overhead area and a payload area.

20 3. A method for transmitting at least one client signal within a server signal as claimed in claim 2, wherein the determined identification number is transmitted into the overhead area of the server signal.

25 4. A method for transmitting at least one client signal within a server signal as claimed in claim 2, wherein a number of data items in the client signal which are distributed within the server signal is defined by the identification number.

5. A method for transmitting at least one client signal within a server signal as claimed in claim 2, wherein the determined identification number is used as numerator, and a data-format-specific size of the payload area of the server signal is used as denominator for the sigma-delta modulation.

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6. A method for transmitting at least one client signal within a server signal as claimed in claim 2, wherein, at the transmission end, the sigma-delta modulation is used to determine a payload area position of respective data items in the client signal to be transmitted within the server signal, and a data item in the 10 client signal is inserted into the server signal at the determined payload area position.

7. A method for transmitting at least one client signal within a server signal as claimed in claim 2, wherein, at the receiving end, both the sigma-delta 15 modulation and the identification number transmitted therewith are used to determine payload area positions of data items in the client signal which are transmitted within the server signal, and a data item in the client signal is read from the server signal at the determined payload area position.

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8. A method for transmitting at least one client signal within a server signal as claimed in claim 2, wherein, in order to transmit a plurality of client signals, which are at different bit rates, using the one server signal, each client signal is assigned at least one section of the payload area of the server signal.

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9. A method for transmitting at least one client signal within a server signal as claimed in claim 8, wherein, when transmitting the plurality of client signals which are at different bit rates, an identification number is determined and transmitted for each client signal.

10. A method for transmitting at least one client signal within a server signal as claimed in claim 8, wherein, when transmitting the plurality of client signals which are at different bit rates, sigma-delta modulation is respectively carried out for each client signal.

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11. A method for transmitting at least one client signal within a server signal as claimed in claim 1, wherein the identification number is protected by a security mechanism.

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12. A method for transmitting at least one client signal within a server signal as claimed in claim 1, wherein the data in the at least one client signal is transmitted in one of bits and groups of bits within the payload area of the server signal.

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13. A system for transmitting at least one client signal which has a first transmission bit rate within a server signal which has a predetermined second transmission bit rate, wherein the first and second transmission bit rates are different, the system comprising:

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an identification number determination unit provided in a first transmission unit for determining at least one identification number, which indicates a relationship between the first and second transmission bit rates, for at least one client signal;

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a first sigma-delta modulator provided in the first transmission unit for determining an insertion control signal from the determined identification number, for virtually uniform insertion of data in the at least one client signal into the server signal;

an identification number insertion unit for inserting the identification number into the server signal;

14. A transmitter provided in the first transmission unit for transmitting the server signal and the determined identification number to at least one second transmission unit;

15. an identification number removal unit provided in the second transmission unit for removing the identification number from the transmitted server signal; and

16. a second sigma-delta modulator for determining a removal control signal based on the transmitted identification number for removing the data in the at least one client signal from the transmitted server signal.

10. 14. A system for transmitting at least one client signal within a server signal as claimed in claim 13, further comprising:
a first and a second frame counter unit provided in the first and second transmission units, respectively, for determining a frame start signal and a payload area signal, respectively, based on the server clock signal.

15. 15. A system for transmitting at least one client signal within a server signal as claimed in claim 13, further comprising:
a client clock determination unit provided in the second transmission unit for determining a client clock signal at least based on the transmitted identification number and the server clock signal.

20. 16. A system for transmitting at least one client signal within a server signal as claimed in claim 15, further comprising:
at least one first buffer memory and one second buffer memory for storing the client signal and the server signal, respectively, the at least one first buffer memory and at least one second buffer memory provided in the first and the second transmission units, respectively, wherein a current filling level of the first and second buffer memories in the identification number determination unit and the client clock determination unit, respectively, are indicated.